



Training Proposal for:
California and Nevada Labor Management Cooperation Trust
Clean Energy Workforce Training Program (CEWTP)
Agreement Number: ET10-0600

Panel Meeting of: **January 29, 2010**

ETP Regional Office: **San Francisco Bay Area**

Analyst: D. Woodside

PROJECT PROFILE

Contract

Type: New Hire

Retrainee

Industry

Sector(s): Construction

Green Technology

Counties

Served: Statewide

Union(s): ☒ Yes ☐ No

International Brotherhood of
Electrical Workers (IBEW)
Various Locals.

FUNDING DETAIL

All funding will be under the American Recovery and Reinvestment Act (ARRA).

Program Costs	Support Costs	Total ETP Funding	In-Kind Contribution
\$422,500	\$27,675	\$450,175	Inherent

TRAINING PLAN TABLE

Job No.	Job Description (by Contract Type)	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	New Hire	Advanced Technology	225	50-120	0	\$1,383	\$23.64
				Weighted Avg: 50			
2	Retrainee	Advanced Technology	100	50-120	0	\$1,390	\$23.64
				Weighted Avg: 50			

ETP Minimum Wage by County (Benchmark): \$14.87 for Alameda, Contra Costa, Los Angeles, Marin, Orange, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties; \$14.64 for Sacramento County; \$14.30 for San Diego County; \$13.63 for Ventura County; and \$13.63 for all other counties.

Health Benefits: ☒ Yes ☐ No This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: ☐ Yes ☒ No ☐ Maybe

Participating employers will not need to use health benefits to meet the Post-Retention Wage.

Wage Range by Occupation	
Occupation Title	Wage Range
Electrician (Journeylevel)	

INTRODUCTION

The California and Nevada Labor Management Cooperation Trust is the legal entity for the California Labor Management Cooperating Committee (LMCC) of the International Brotherhood of Electrical Workers (IBEW) and the National Electrical Contractors Association (NECA). The trust, doing business as the LMCC, seeks funding to retrain 225 unemployed electricians (Job Number 1) and 100 incumbent electricians (Job Number 2) throughout California.

All trainees will be represented by the International Brotherhood of Electrical Workers (IBEW) as placed and retained. Under the Panel's guidelines for CEWTP, the 70% Portfolio Model will be made available for new-hire trainees. The retention period may be 200 hours within 365 days, consistent with the guidelines.

The trainees will all be journey-level state-certified electricians. The participating employers will be drawn from members of the National Electrical Contractors Association (NECA). Both IBEW and NECA work in partnership through the LMCC for training projects such as this, under a special Committee.

The LMCC is governed by a Board of Trustees comprised of equal numbers of labor and management representatives. Over the past 30 years, it has coordinated the delivery of industry-driven technical training to some 34,000 state-certified electricians and 2,000 licensed electrical contractors using training centers operated statewide by 23 Joint Apprenticeship Training Committees (JATCs).

While some of these 23 JATCs have received and continue to receive “core program” ETP funding for the same trainee population, this proposal would deliver more advanced skills in the emerging field of green/clean electrical technology. Training under this proposal would be for a new 50-hour course developed by the California Advanced Lighting Controls Training Program (CALCTP), which is not available through any JATC.

JATC training programs provide basic lighting controls instruction as needed to prepare electricians for the new CALCTP. Of the 23 JATCs statewide, 13 will deliver the more advanced instruction. IBEW and NECA will work with these JATCs to ensure that certified instructors, lab equipment, and training materials are available at each training center.

According to the LMCC, this training proposal is a “first in the nation” collaboration among all sectors of the energy marketplace. As such, partners include the California Energy Commission (CEC), the UC Davis California Lighting Technology Center (CLTC), the California Investor-Owned and Municipal Utilities (IOMU), and the National Lighting Manufacturers Association (NEMA). The purpose of this collaboration is to support the training of state-certified electricians (Journeyman Inside Wiremen) in the design, installation, and maintenance of Advanced Lighting Controls to improve energy efficiency in commercial and industrial facilities across the state.

The curriculum is designed to result in a specialty CALCTP Certification upon completing 50 hours of training and passing a four-hour examination. There are 30 “master instructors”. each of whom has completed a 40-hour train-the-trainer course through the UC Davis CLTC and the Electrical Training Center of South California have been certified as competent in teaching the this specialty CALCTP. This approach is designed to standardize delivery of course modules under the curriculum.

PROJECT DETAILS

The training program will provide for scheduling flexibility by sequencing skill building and laboratory instruction in modules. This will allow both unemployed and incumbent general electricians to attend training during all day, evening-only, or evening and weekend formats.

Advanced Skills

The LMCC seeks reimbursement at \$26 per hour, equivalent to the Advanced Technology rate under the ETP “core program” based on the higher cost of CALCTP training. The “master instructors” are higher-paid and the class/lab materials must be customized. Training in Advanced Control Systems focuses on new, emerging technologies as follows:

- Lab equipment is complex and includes technical computer software
- Trainer boards use advanced electronic components
- New control systems require in-depth knowledge of existing building systems
- Installation requires special protocols, using technical digital meters and scopes to integrate new control systems with existing electrical systems

Due to these complexities, the classroom trainer-to-trainee ratio is 1:10 and the lab ratio is 1:5. The lab ratio is driven by “trainer board” equipment that must meet industry specifications. A maximum of two trainees are permitted per trainer board (double-faced).

There are seven sequential laboratory modules, each requiring a tested competency of 80% to proceed to the next module. The standardized certification exam is proctored after successful completion of all seven modules. Thus, this is a demanding curriculum which meets utilities and

lighting control manufacturers' needs for competent design, installation, commissioning, troubleshooting, and maintenance of energy efficient electrical systems.

The LMCC will maintain rigorous standards for program completion and projects a trainee certification rate of 75%. Under ETP's "variable reimbursement" system trainees who are not successful the first time may retake portions of the training as necessary.

Trainee Recruitment

The LMCC will promote CALCTP advanced skills training state-wide through internal monthly membership meetings, website announcements, newsletters, labor-management meetings, industry assemblies, and externally through labor and industry partners and stakeholders. The JATCs are viewed by both workers and employers as the primary training resource for this industry, especially for advanced skill training.

Employer Demand for Training

Employers needing workers with the skills provided in the CALCTP curriculum vary in size from small specialty electrical shops to national and international mechanical and electrical construction contractors. Examples of participating employers include: one of the fastest growing companies in Southern California which received the National Electrical Contractors Association (NECA) Award for Electrical Excellence for its work on the Walt Disney Concert Hall. Another participating employer is one of the largest electrical contracting firms in California which is expanding its Energy Alternatives Division to provide energy solutions for Silicon Valley and the state of California. Another San Jose-based participating employer is the largest renewable energy firm in the United States. In addition, regional specialty electrical contractors, designated as ESCO (Energy Solutions Company), which provide energy efficiency solutions to municipalities and commercial building owners, will participate in hiring and retraining workers.

All participating employers, but for members of NECA, will be screened for compliance with the Panel's guidelines for eligibility under CEWTP prior to trainee enrollment.

RECOMMENDATION

Staff recommends approval of this project under the joint ETP/CEC Clean Energy Workforce Training Program.

DEVELOPMENT SERVICES

N/A

ADMINISTRATIVE SERVICES

The LMCC will retain ICF International in Sherman Oaks to perform administrative services in connection with this proposal for a fee to be determined but not to exceed 13% of payment earned.

TRAINING VENDORS

N/A

Exhibit B: Menu Curriculum**Class/Lab Hours**

50-120

Codes and Standards Relating to Advanced Lighting Controls

2008 National Electrical Code
2008 Building Energy Efficiency Standards
California Code of Regulations, Title 20 and Title 24
ANSI/ASHRAE/IESNA 90.1 American National Standards Institute (ANSI)/American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)/Illuminating Engineering Society of North America (IESNA)
This standard is used as a basis for state energy codes.
Federal Code of Regulations 10 CFR-434
2009 International Energy Conservation Code
USGBC LEED (U.S. Green Building Council, Leadership in Energy and Environmental Design) nationwide certification for compliance with energy efficiency and green building standards

Introduction to Lighting Controls
Lamp and Ballast Systems
Lighting Control Strategies

Line Voltage Switching Control
Switching Control Systems and Applications
Operation and Wiring Schematics

Low Voltage Switching Control
Low Voltage Switching Systems and Applications
Operation and Wiring Schematics

Dimming Controls
Dimming Control Systems and Applications
Operation and Wiring Schematics

Occupancy Sensors
Occupancy Systems and Applications
Operation and Wiring Schematics

Photosensors
Photosensor Systems and Application
Operation and Wiring Schematics

Advanced Lighting Control Systems
Systems and Applications
Operation and Commissioning

Note: Reimbursement for all training is capped at 120 total training hours per trainee, regardless of delivery method.

**International
Electrical**



**Brotherhood
Workers**

AFL-CIO

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December 21, 2009

TO: Employment Training Panel

RE: CA LMCC/IBEW-NECA application for CALCTP funding

Dear Training Panel Members,

The International Brotherhood of Electrical Workers (IBEW) has partnered with the National Electrical Contractors Association, California Investor Owned and Municipal Utilities, the California Energy Commission, the California Lighting Technology Center at UC Davis and ICF International to develop and implement the California Advanced Lighting Controls Training Program (CALCTP). We are pleased that our application for ETP training funds is being considered by panel members and fully support the allocation of funding to the CA LMCC/IBEW-NECA JATCs to provide advanced technical training through CALCTP to unemployed and incumbent state certified general electricians (Journeyman Inside Wireman). Please feel free to contact me for any additional information that the panel may need.

A handwritten signature in cursive script, reading "Robert V. Tragni".

Robert V. Tragni
State Co-Chair, CA LMCC/IBEW-NECA
Business Manager, Santa Clara IBEW Local 332